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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,261	02/17/2004	Robert W. Gray	1008 014 301 02 01	3426
37211	7590	02/08/2005	EXAMINER	
BASCH & NICKERSON LLP			SHRIVASTAV, BRIJ B	
1777 PENFIELD ROAD			ART UNIT	
PENFIELD, NY 14526			PAPER NUMBER	

2859

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/780,261

Applicant(s)

GRAY ET AL.

Examiner

Brij B Shrivastav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10, 11, 14-18, 21-26, 28, 30-32, 35-40, 42, 44-46, 48 and 49 is/are rejected.
- 7) ☒ Claim(s) 4, 8, 9, 12, 13, 19, 20, 27, 29, 33, 34, 41, 43 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7.12.04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claim 4 is numbered as claim 3. To correct the typing mistake, Examiner amends by numbering **claim 4 as claim 49**.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6, 7, 10, 11, 14-18, 21-26, 28, 30-32, 35-40, 42 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Keller et al (US 5,278,503).

As regards to claim 1, Keller et al teach a voltage compensation unit for reducing the effects of induced voltages upon a device to a safe level (figures 1 and 3), including a sensing circuit to sense voltages induced in conductive components of the device, wherein the voltages being induced by changing magnetic fields (figure 3, numerals 2a-2h; column 13 and 14, lines 19-68 and 1-14) and a compensation circuit, operatively connected to the sensing circuit to provide opposing voltages to the device to reduce the effects of induced voltages caused by changing magnetic fields (figure 3, numerals 3, 4; column 13 and 14, lines 19-68 and 1-14).

As regards to claim 10, Keller et al teach a sensing circuit to sense voltages induced in conductive components of the medical tool, wherein the voltages being induced by changing magnetic fields (figure 1 and 3, numerals 2a-2h; column 13 and 14, lines 19-68 and 1-14; for medical tool, see title of the patent); a compensation

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circuit, operatively connected to the sensing circuit and to provide opposing voltages to the medical tool to reduce the effects of induced voltages caused by changing magnetic fields (figure 3, numerals 3, 4; column 13 and 14, lines 19-68 and 1-14; column 1, lines 9-62,); and a connection device to provide an electrical connection between said sensing circuit and said compensation circuit and the medical tool (figure 1, as can be seen, the induction coils 61 and 62 are connected through a device to the compensation coil 63 ).

As regards to claim 16, Keller et al teach a voltage compensation unit for reducing the effects of induced voltages upon a device to a safe level, including a communication circuit, linked communicatively to a MRI system to receive information associated with a start and end of an application of changing magnetic fields produced by the MRI system (figure 1 and 3, numerals 2a-2h; column 13 and 14, lines 19-68 and 1-14; for MRI system, see the title of the patent); and a compensation unit for reducing the effects of induced voltages is operatively connected to communication circuit to synchronize application of opposing voltages to the device with the sensed changing magnetic fields, wherein opposing voltages reducing the effects of induced voltages caused by the changing magnetic fields (figure 3, numerals 3, 4; column 13 and 14, lines 19-68 and 1-14; column 1, lines 9-62, numerals 3, 4; column 13 and 14, lines 19-68 and 1-14; column 1, lines 9-62; figure 1, numerals 61-63).

As regards to claim 30, Keller et al teach a voltage compensation unit for reducing the effects of induced voltages upon a device to a safe level, including a communication circuit, communicatively linked to a MR1 system (figure 1), to receive

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information associated with a start and end of an application of changing magnetic fields produced by the MRI system (figure 1 and 3, numerals 2a-2h; column 13 and 14, lines 19-68 and 1-14; for MRI system, see the title of the patent ); and a compensation circuit, operatively connected to said communication circuit and responsive thereto, to apply opposing voltages to the device, said opposing voltages reducing the effects of induced voltages caused by the changing magnetic fields (figure 3, numerals 3, 4; column 13 and 14, lines 19-68 and 1-14; column 1, lines 9-62, numerals 3, 4; column 13 and 14, lines 19-68 and 1-14; column 1, lines 9-62; figure 1, numerals 61-63 ).

3. Claim 44-46 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Haragashira (US 5,235,281)

As regards to claim 44, Haragashira teaches a voltage compensation unit for reducing the effects of induced voltages upon a device having a single wire line connected to a balanced characteristic impedance (figure 12, numerals 12, 14 and 34), including a tunable compensation circuit, operatively connected to the wire line to apply supplemental impedance to the wire line (figures 20-23; column 8 and 9, lines 31-68, 19-65), said supplemental impedance causing the characteristic impedance of the wire line to become unbalanced, thereby reducing the effects of induced voltages caused by changing magnetic fields (figures 14, 16, 29 and 30; column 7, lines 21-62 ).

4. As regards to claims 6 and 7, Keller et al further teach electrical multiple connections between the sensing circuit, communication circuit and the device as can be seen in figure 1.

As regards to claims 11 and 14, Keller et al further teach a medical tool with electrical multiple connections (figure 1), and a second sensing circuit connected to the compensation circuit (figure 3, numerals 4).

As regards to claims 17, 18, 21, 24-26, and 28, Keller et al further teach multiple connections between the compensation circuit and the device, receiving information from the MRI system through electrical wires or cables as shown in figure 1.

As regards to claims 31, 32, 38-40, and 42, Keller et al further teach multiple connections between the communication circuit and the device using wires or electrical cables shown in figure 1.

As regards to claims 45, 46 and 48, Haragashira teaches tunable compensation circuit variable capacitor to change impedance of the circuit shown in figure 1 and 12.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 5, 15, 22, 23, 35-37 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,278,503) as respectively applied to claim 1, 10, 16, 30 and 40 above, and further in view of Haragashira et al (US 5,235,281).

As regards to claims 2, 3, 5, 15, 22, 23, 35-37 and 49 Keller et al fail to teach shielded compensation circuit and sensing circuits connected to the device. Haragashira teaches shielded compensation circuit and sensing circuits connected to

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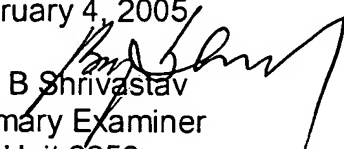
the device (figures 1, 12, 14 and 30, column 7, lines 21-37). It would have been obvious to one having ordinary skill to combine connection and shielding teaching of Haragashira to the teaching of Keller et al to improve signal to noise ratio if the signal received improving image quality.

6. Claims 4, 8, 9, 12, 13, 19, 20, 27, 29, 33, 34, 41, 43, 47 are objected to as being dependent upon a rejected base claim (s), but would be allowable if rewritten in independent form including all of the limitations of respective base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brij B Shrivastav whose telephone number is 571-272-2250. The examiner can normally be reached on 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). February 4, 2005

February 7, 2005

  
Brij B Shrivastav  
Primary Examiner  
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